

SEQUENCE LISTING

<110> Bowles, Dianna et al.

<120> Glucosyltransferase

<130> 5585-74167-01

<150> PCT/GB04/004330

<151> 2004-10-12

<150> 0323813.6

<151> 2003-10-13

<160> 15

<170> PatentIn version 3.1

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<211> 1464

<212> DNA

<213> Arabidopsis thaliana

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His Gly Phe Asp Val Thr Ile Phe Val Leu Glu Thr Asp Ala Ala Ser
35 40 45

Ala Gln Ser Gln Phe Leu Asn Ser Pro Gly Cys Asp Ala Ala Leu Val
50 55 60

Asp Ile Val Gly Leu Pro Thr Pro Asp Ile Ser Gly Leu Val Asp Pro
65 70 75 80

Ser Ala Phe Phe Gly Ile Lys Leu Leu Val Met Met Arg Glu Thr Ile
85 90 95

Pro Thr Ile Arg Ser Lys Ile Glu Glu Met Gln His Lys Pro Thr Ala
100 105 110

Leu Ile Val Asp Leu Phe Gly Leu Asp Ala Ile Pro Leu Gly Gly Glu
115 120 125

Phe Asn Met Leu Thr Tyr Ile Phe Ile Ala Ser Asn Ala Arg Phe Leu
130 135 140

Ala Val Ala Leu Phe Phe Pro Thr Leu Asp Lys Asp Met Glu Glu Glu
145 150 155 160

His Ile Ile Lys Lys Gln Pro Met Val Met Pro Gly Cys Glu Pro Val
165 170 175

Arg Phe Glu Asp Thr Leu Glu Thr Phe Leu Asp Pro Asn Ser Gln Leu
180 185 190

Tyr Arg Glu Phe Val Pro Phe Gly Ser Val Phe Pro Thr Cys Asp Gly
195 200 205

Ile Ile Val Asn Thr Trp Asp Asp Met Glu Pro Lys Thr Leu Lys Ser
210 215 220

Leu Gln Asp Pro Lys Leu Leu Gly Arg Ile Ala Gly Val Pro Val Tyr
225 230 235 240

Pro Ile Gly Pro Leu Ser Arg Pro Val Asp Pro Ser Lys Thr Asn His
245 250 255

Pro Val Leu Asp Trp Leu Asn Lys Gln Pro Asp Glu Ser Val Leu Tyr
260 265 270

Ile Ser Phe Gly Ser Gly Gly Ser Leu Ser Ala Lys Gln Leu Thr Glu
275 280 285

Leu Ala Trp Gly Leu Glu Met Ser Gln Gln Arg Phe Val Trp Val Val
290 295 300

Arg Pro Pro Val Asp Gly Ser Ala Cys Ser Ala Tyr Leu Ser Ala Asn
305 310 315 320

Ser Gly Lys Ile Arg Asp Gly Thr Pro Asp Tyr Leu Pro Glu Gly Phe
325 330 335

Val Ser Arg Thr His Glu Arg Gly Phe Met Val Ser Ser Trp Ala Pro
340 345 350

Gln Ala Glu Ile Leu Ala His Gln Ala Val Gly Gly Phe Leu Thr His

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Cys Gly Trp Asn Ser Ile Leu Glu Ser Val Val Gly Gly Val Pro Met				
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Ile Ala Trp Pro Leu Phe Ala Glu Gln Met Met Asn Ala Thr Leu Leu				
385		390		400
Asn Glu Glu Leu Gly Val Ala Val Arg Ser Lys Lys Leu Pro Ser Glu				
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Gly Val Ile Thr Arg Ala Glu Ile Glu Ala Leu Val Arg Lys Ile Met				
	420		425	430
Val Glu Glu Glu Gly Ala Glu Met Arg Lys Lys Ile Lys Lys Leu Lys				
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Glu Thr Ala Ala Glu Ser Leu Ser Cys Asp Gly Gly Val Ala His Glu				
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Asn Gly Phe His Val Thr Val Phe Val Leu Glu Thr Asp Ala Ala Ser
35 40 45

Ala Gln Ser Lys Phe Leu Asn Ser Thr Gly Val Asp Ile Val Lys Leu
50 55 60

Pro Ser Pro Asp Ile Tyr Gly Leu Val Asp Pro Asp Asp His Val Val
65 70 75 80

Thr Lys Ile Gly Val Ile Met Arg Ala Ala Val Pro Ala Leu Arg Ser
85 90 95

Lys Ile Ala Ala Met His Gln Lys Pro Thr Ala Leu Ile Val Asp Leu
100 105 110

Phe Gly Thr Asp Ala Leu Cys Leu Ala Lys Glu Phe Asn Met Leu Ser
115 120 125

Tyr Val Phe Ile Pro Thr Asn Ala Arg Phe Leu Gly Val Ser Ile Tyr
130 135 140

Tyr Pro Asn Leu Asp Lys Asp Ile Lys Glu Glu His Thr Val Gln Arg
145 150 155 160

Asn Pro Leu Ala Ile Pro Gly Cys Glu Pro Val Arg Phe Glu Asp Thr
165 170 175

Leu Asp Ala Tyr Leu Val Pro Asp Glu Pro Val Tyr Arg Asp Phe Val
180 185 190

Arg His Gly Leu Ala Tyr Pro Lys Ala Asp Gly Ile Leu Val Asn Thr
195 200 205

Trp Glu Glu Met Glu Pro Lys Ser Leu Lys Ser Leu Leu Asn Pro Lys
210 215 220

Leu Leu Gly Arg Val Ala Arg Val Pro Val Tyr Pro Ile Gly Pro Leu
225 230 235 240

Cys Arg Pro Ile Gln Ser Ser Glu Thr Asp His Pro Val Leu Asp Trp
245 250 255

Leu Asn Glu Gln Pro Asn Glu Ser Val Leu Tyr Ile Ser Phe Gly Ser
260 265 270

Gly Gly Cys Leu Ser Ala Lys Gln Leu Thr Glu Leu Ala Trp Gly Leu
275 280 285

Glu Gln Ser Gln Gln Arg Phe Val Trp Val Val Arg Pro Pro Val Asp
 290 295 300

Gly Ser Cys Cys Ser Glu Tyr Val Ser Ala Asn Gly Gly Gly Thr Glu
 305 310 315 320

Asp Asn Thr Pro Glu Tyr Leu Pro Glu Gly Phe Val Ser Arg Thr Ser
 325 330 335

Asp Arg Gly Phe Val Val Pro Ser Trp Ala Pro Gln Ala Glu Ile Leu
 340 345 350

Ser His Arg Ala Val Gly Gly Phe Leu Thr His Cys Gly Trp Ser Ser
 355 360 365

Thr Leu Glu Ser Val Val Gly Gly Val Pro Met Ile Ala Trp Pro Leu
 370 375 380

Phe Ala Glu Gln Asn Met Asn Ala Ala Leu Leu Ser Asp Glu Leu Gly
 385 390 395 400

Ile Ala Val Arg Leu Asp Asp Pro Lys Glu Asp Ile Ser Arg Trp Lys
 405 410 415

Ile Glu Ala Leu Val Arg Lys Val Met Thr Glu Lys Glu Gly Glu Ala
 420 425 430

Met Arg Arg Lys Val Lys Lys Leu Arg Asp Ser Ala Glu Met Ser Leu
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Ser Ile Asp Gly Gly Gly Leu Ala His Glu Ser Leu Cys Arg Val Thr
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Lys Glu Cys Gln Arg Phe Leu Glu Arg Val Val Asp Leu Ser Arg Gly
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Gly His Val Leu Pro Val Ile Glu Leu Ala Lys Arg Leu Ser Ala Asn
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His Gly Phe His Val Thr Val Phe Val Leu Glu Thr Asp Ala Ala Ser
35 40 45

Val Gln Ser Lys Leu Leu Asn Ser Thr Gly Val Asp Ile Val Asn Leu
50 55 60

Pro Ser Pro Asp Ile Ser Gly Leu Val Asp Pro Asn Ala His Val Val
65 70 75 80

Thr Lys Ile Gly Val Ile Met Arg Glu Ala Val Pro Thr Leu Arg Ser
85 90 95

Lys Ile Val Ala Met His Gln Asn Pro Thr Ala Leu Ile Ile Asp Leu
100 105 110

Phe Gly Thr Asp Ala Leu Cys Leu Ala Ala Glu Leu Asn Met Leu Thr
115 120 125

Tyr Val Phe Ile Ala Ser Asn Ala Arg Tyr Leu Gly Val Ser Ile Tyr
130 135 140

Tyr Pro Thr Leu Asp Glu Val Ile Lys Glu Glu His Thr Val Gln Arg
145 150 155 160

Lys Pro Leu Thr Ile Pro Gly Cys Glu Pro Val Arg Phe Glu Asp Ile
165 170 175

Met Asp Ala Tyr Leu Val Pro Asp Glu Pro Val Tyr His Asp Leu Val
180 185 190

Arg His Cys Leu Ala Tyr Pro Lys Ala Asp Gly Ile Leu Val Asn Thr
195 200 205

Trp Glu Glu Met Glu Pro Lys Ser Leu Lys Ser Leu Gln Asp Pro Lys
210 215 220

Leu Leu Gly Arg Val Ala Arg Val Pro Val Tyr Pro Val Gly Pro Leu
 225 230 235 240

Cys Arg Pro Ile Gln Ser Ser Thr Thr Asp His Pro Val Phe Asp Trp
 245 250 255

Leu Asn Lys Gln Pro Asn Glu Ser Val Leu Tyr Ile Ser Phe Gly Ser
 260 265 270

Gly Gly Ser Leu Thr Ala Gln Gln Leu Thr Glu Leu Ala Trp Gly Leu
 275 280 285

Glu Glu Ser Gln Gln Arg Phe Ile Trp Val Val Arg Pro Pro Val Asp
 290 295 300

Gly Ser Ser Cys Ser Asp Tyr Phe Ser Ala Lys Gly Gly Val Thr Lys
 305 310 315 320

Asp Asn Thr Pro Glu Tyr Leu Pro Glu Gly Phe Val Thr Arg Thr Cys
 325 330 335

Asp Arg Gly Phe Met Ile Pro Ser Trp Ala Pro Gln Ala Glu Ile Leu
 340 345 350

Ala His Gln Ala Val Gly Gly Phe Leu Thr His Cys Gly Trp Ser Ser
 355 360 365

Thr Leu Glu Ser Val Leu Cys Gly Val Pro Met Ile Ala Trp Pro Leu
 370 375 380

Phe Ala Glu Gln Asn Met Asn Ala Ala Leu Leu Ser Asp Glu Leu Gly
 385 390 395 400

Ile Ser Val Arg Val Asp Asp Pro Lys Glu Ala Ile Ser Arg Ser Lys
 405 410 415

Ile Glu Ala Met Val Arg Lys Val Met Ala Glu Asp Glu Gly Glu Glu
 420 425 430

Met Arg Arg Lys Val Lys Lys Leu Arg Asp Thr Ala Glu Met Ser Leu
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Ser Ile His Gly Gly Gly Ser Ala His Glu Ser Leu Cys Arg Val Thr
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 gtccttgaaa ccgacgcagc ctcagctcaa tctcaattcc ttaactcacc aggctgcgac 180
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 atgtcttgca gcggagtaa acatgttgac ttatgtcttt atcgcttcca acgcgcgtta 180
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 ggcttaccba aaagccgatg gaattttggt aaatacatgg gaagagatgg agcccaaadc 180
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 aatcgggt 247